

REMARKS

In view of the foregoing amendments and the following representations, reconsideration and allowance of the above-identified application is respectfully requested.

Claims 1-29 have been canceled without prejudice. New claims 30-54 have been added and are in the present application. No new matter is added new claims 30-54. Support can be found in claims 1-29 as originally filed, page 2, lines 6-11 of the specification and Examples 1-4 which appear on pages 10-18 of the specification. Further support for the in vitro testing limitations recited in new claims 31, 32, 49 and 50 can be found on page 16, lines 6-20 of the specification.

The invention recited in the currently pending claims is a controlled release methylphenidate tablet that comprises two primary elements: 1) an immediate release methylphenidate coating and 2) a controlled release methylphenidate tablet core. The controlled release methylphenidate tablet core comprises a compressed mixture of methylphenidate and a hydrogel polymer and an enteric coating around the compressed mixture. This unique dosage form is further required to exhibit two distinct methylphenidate plasma peaks when the tablet is administered to humans. In addition, the claimed tablet must exhibit a controlled release of the methylphenidate when tested in a pH 7.5 media.

Applicants respectfully submit the presently claimed formulation is patentable over the references of record because none of the references either alone or combined disclose or suggest a methylphenidate tablet that employs a compressed admixture of

methylphenidate and a hydrogel polymer which is subsequently coated with an enteric polymer to provide controlled release of the methylphenidate over an extended period of time when tested in high pH environments.

In the Office Action, on page 4, the Examiner rejected claims 1, 3-4, 6-13, 16-22, 24-26 and 28-29 under 35 U.S.C. § 103(a) as being unpatentable over the teachings of Mehta et al. United States Patent No. 5,837,284 ("Mehta.") in view of Mulye, United States Patent No. 6,475,493 ("Mulye") and Beiman et. al., United States Patent No. 6,312,728 ("Beiman").

As indicated above, the present claims all require a compressed core comprising methylphenidate and a hydrogel polymer wherein the compressed mixture is coated with an enteric polymer. The claims further require that the methylphenidate is released in a controlled manner when exposed to a high pH environment. A enteric coated methylphenidate tablet that exhibits the recited dissolution profile in pH 7.5 is not disclosed or suggested by the references of record.

As discussed in the prior Amendments, the Mehta reference discloses oral methylphenidate dosage forms that employ immediate release pellets and controlled release pellets. The Mehta reference only discloses the use of ammonio methacrylate copolymers to control the release of the methylphenidate from the controlled release pellets. Col. 7, line 13-Col.8, line 57. Ammonio methacrylate copolymers are not enteric materials. Applicants again gratefully acknowledge the Examiner's prior indication that the Mehta fails to disclose the use of an enteric polymer. Applicants also respectfully submit, the Mehta reference fails to disclose the use of a compressed admixture of methylphenidate and a hydrogel polymer to control the release of the methylphenidate

from the core as required by the pending claims.

The addition of the Mulye reference to the Mehta reference fails to suggest to an individual of ordinary skill the controlled release methylphenidate tablet recited in the currently pending claims. In fact, the Mulye reference would lead an individual of ordinary skill away from the presently claimed invention. The Mulye reference discloses multiparticulate dosage forms, but not methylphenidate dosage forms, wherein the release of the drug is controlled by a coating comprising an enteric polymer and a water insoluble polymer. For example, Col. 7, lines 8-11 of the Mulye reference states: "the water insoluble polymer and the enteric polymer interact to form a barrier over the core element containing the active ingredient to control the rate of release". *See also*: Col. 8, lines 55-62 ("The coating composition of the present invention is present in an amount effective to retard the release of the active ingredient"). The Mulye coating comprises at least 75% of a water insoluble polymer and 1-25% of an enteric polymer. Mulye, Col. 4, lines 30-49.

Col. 16, lines 40-65 of the Mulye reference provides dissolution data for a number of coated formulations prepared in accordance with the Mulye teachings and for a comparative example that employs a coating that is 100% enteric polymer. Portions of this dissolution data from the Mulye reference are reproduced below for the Examiner's convenience.

<u>Example</u>	<u>Coating Composition</u>	<u>Comments</u>
Comp. Ex. 1	100% PVAP	Rapid release in pH 7.4
Example 1	Ethylcellulose 75% PVAP 20% HPMC 5%	Very Rapid release in pH 7.4

Example 2	Ethylcellulose 90% PVAP 10% HPMC 3%	Rapid release in pH 7.4
Example 3	Ethylcellulose 90% PVAP 10%	Rapid Release in pH 7.4

Col. 16, lines 45-60 of the Mulye reference (emphasis added). This data clearly demonstrates to an individual of ordinary skill in the art that enteric coated pellets rapidly release the drug in high pH environments. Further leading an individual of ordinary skill away for the presently claimed invention is the fact the drug cores for the above examples and comparative examples employ HPMC, which is a hydrogel polymer. It is respectfully submitted, the express teaching of the Mulye reference would lead an individual of ordinary skill away from the presently claimed invention because the express teachings of Mulye demonstrate a rapid drug release rather than a controlled release as sought by the Applicants in high pH media.

Because the present claims require a controlled release of the methylphenidate in a pH 7.5 media, it is respectfully submitted that the pending claims are patentable over the combination of the Mehta and Mulye references.

The addition of the Beiman reference to the teachings of the Mehta and Mulye references also fails to overcome the deficiencies of the Mehta/Mulye proposed combination. First, the Beiman reference teaches multiparticulate dosage forms but fails to mention methylphenidate. It is respectfully submitted that an individual of ordinary skill would not look to the Beiman reference for guidance on preparing a controlled release methylphenidate tablet due to the lack of a methylphenidate dosage from

disclosure.

If an individual of ordinary skill were led to combine the Beiman reference with the Mehta and Mulye references, the individual of ordinary skill would not arrive at the presently claimed invention. The individual of ordinary skill would consider the multiparticulates disclosed in the Beiman reference similar to the pellets disclosed in the Mulye reference and therefore expect a rapidly release of drug from enteric coated dosage forms in high pH media. More specifically, the Beiman pellets (multiparticulates) employ a drug core coated with an enteric polymer followed by an immediate release drug layer applied to the enteric coating. The drug core/enteric coating structure is similar to the structure of the pellets disclosed and tested in the Mulye reference. The Beiman reference fails to provide any dissolution data for its enteric coated pellets but rather discussed the varying pH solubility of the drugs to assist in the controlled absorption of the drug over the GI tract. In view of the similarity between the enteric coated pellets of the Beiman reference and the examples of the Mulye reference discussed above, an individual of ordinary skill would conclude that the drug from the core of the Beiman pellets would rapidly release in a high pH media similar to the Mulye pellets.

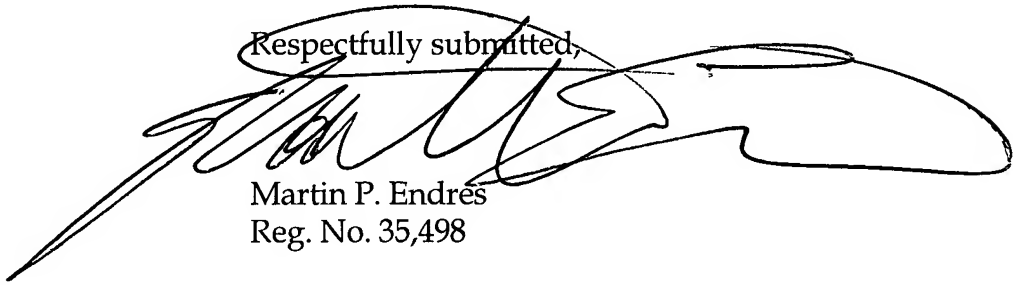
Therefore, based upon the structural similarities of the Beiman pellets and the Mulye pellets, an individual of ordinary skill would not be led to the presently claimed controlled release methylphenidate tablet based upon the combined teachings of the Mehta, Mulye and Beiman references.

In view of the foregoing, Applicants respectfully submit that the present claims are patentable over the combination of references. Moreover, Applicants respectfully submit

that in view of the express teaching of the Mulye reference, an individual of ordinary skill would expect the inclusion of even a small percentage of enteric polymer into to a water insoluble polymeric coating, would produce a dosage form that rapidly releases the drug from the dosage form in a high pH medium. The Applicants have surprisingly discovered that an enteric coated tablet wherein the tablet comprises a compressed mixture of methylphenidate and hydrogel polymer will result in a controlled release of the methylyphenidate even in a high pH environments and not a rapid release as expressly taught by the Mulye reference.

Based upon the foregoing amendments and representations, Applicants respectfully submit that the rejection of the claims in the above-identified application have been overcome and should be withdrawn. Early and favorable action is earnestly solicited.

Respectfully submitted,



Martin P. Endres
Reg. No. 35,498

MAILING ADDRESS:
HEDMAN & COSTIGAN, P.C.
1185 Avenue of the Americas
New York, NY 10036-2601
(212) 302-8989